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Stable Ischemic Heart Disease

THE LOW YIELD OF STRESS IMAGING IN ASYMPTOMATIC PATIENTS POST PCI

Moderated Poster Contributions
Hall C
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Session Title: Stable Ischemic Heart Disease: Imaging and Lesion Assessment
Abstract Category: 25. Stable Ischemic Heart Disease: Clinical
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Authors: *Tyler Peterson, John Askew, Malcolm Bell, Daniel Crusan, David Hodge, Raymond Gibbons, Mayo Clinic, Rochester, MN, USA*

Background: Little is known about the clinical value of stress imaging studies in asymptomatic patients post percutaneous coronary intervention (PCI). In asymptomatic individuals, the AUC (appropriate use criteria) for Cardiac Radionuclide Imaging and the AUC for Stress Echocardiography categorize repeat stress imaging less than two years post PCI as inappropriate and stress imaging greater than or equal to two years post PCI as uncertain.

Methods and Results: Residents of Olmsted County, MN, who underwent PCI were followed for the occurrence of stress imaging (stress nuclear or stress echocardiography), coronary angiography, or coronary artery bypass grafting (CABG) (without angiography) as initial procedures after PCI. Patients whose first follow-up procedure was a stress imaging test were evaluated for their symptom status at the time of the study and whether they underwent angiography or revascularization (PCI or CABG) within 90 days. Of 1848 patients who underwent PCI during the study period, 710 (38%) had stress imaging as their initial procedure after PCI, and 241 (13% of the entire cohort) were asymptomatic at the time of testing. Within 90 days of stress imaging, 16 of the 241 asymptomatic patients underwent angiography and two patients were revascularized. Stratified by timing after PCI, none of 138 asymptomatic patients tested within two years of PCI underwent revascularization. Two of 103 asymptomatic patients tested after two years from PCI underwent revascularization. Compared to patients who were asymptomatic at the time of stress imaging, patients who did not undergo any follow-up procedures (stress imaging, angiography, or CABG) after the index PCI were older, more likely to have co-morbidities, and had significantly greater all-cause mortality ($p<0.001$).

Conclusion: In a population-based sample of patients undergoing PCI, 1 in 8 had subsequent stress imaging when they were asymptomatic. These stress imaging tests resulted in further revascularization in less than 1% of patients. The very low rate of downstream revascularization suggests that stress testing asymptomatic patients post PCI has low value either before or after two years.